BAXALL

CD9000

CAMERA RANGE

- Extremely high picture quality, down to 0.05 lux illumination
- Automatic exposure control, plus electronic and auto iris
- Models to match any internal or external application, including IR

... the new CD9000 range is big on performance and specification.

There are eight different models available, seven with 1/3" format and our highly acclaimed 1/2" infra-red camera, all between 330 and 580 TVL to suit different monitoring applications.

The compact CD9000 range provides installers with a wide choice of sophisticated surveillance technologies, all underwritten by Baxall's reputation for efficiency and reliability.

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HIGH PERFORMANCE MONOCHROME CAMERAS CD9230, CD9251 and CD9252

Suitable for virtually all visible spectrum CCTV applications, these high sensitivity monochrome cameras produce stable, responsive pictures in conditions ranging from starlight through to full daylight. They feature a host of user options which allow their operation to be tailored to a diverse range of interior and exterior situations, and all exhibit Baxall's attention to quality and detail which ensures easy installation and a long, trouble-free life.

All three cameras are provided with a choice of automatic exposure systems. These include back light and bright spot compensation, to ensure the best possible picture under all lighting conditions and can accommodate auto-iris, direct drive, and fixed and manual iris lenses.

All the cameras are based on Sony Hyper HAD™ interline transfer 1/3" CCD sensors, with on-chip micro-lenses over each pixel. The CD9251 and CD9252 have a resolution of 580 lines, whereas the CD9230 has 380 lines resolution. Both the CD9230 and CD9252 have a choice of synchronisation methods, making them ideal systems cameras.

All three cameras are available with built-in mains or universal low-voltage power supplies.

- High sensitivity giving usable picture at 0.1 lux scene illumination
- Advanced exposure control permits use of low-cost fixed iris lenses
- Accepts a wide range of fixed, manual, auto iris and direct drive lenses
- User choice of exposure compensation for demanding lighting conditions
- Range of user selectable electronic shutter speeds (CD9230 and CD9252 only)
- Resolutions of 380 lines (CD9230) and 580 lines (CD9251 and CD9252)
- Four synchronisation schemes for high picture stability in all applications (CD9251 and CD9252 only)

HIGH PERFORMANCE COLOUR CAMERAS CD9311 and CD9312

Where uncompromising performance and reliability, with accurate colour and pin sharp pictures are needed, the Baxall CD9311 and CD9312 are the automatic choice.

These are compact, high performance colour video cameras with a multitude of user options to allow them to be optimised for a wide range of indoor and outdoor applications. Based on Sony Hyper HAD™ interline transfer 1/3" CCD sensors, with on-chip micro-lenses over each pixel, they produce usable pictures in conditions ranging from full sunlight to twilight, and under a wide range of artificial lighting. Choose the CD9311 for its 330 line resolution or the CD9312 for its higher 460 line resolution.

A selection of exposure control systems allows users to employ low cost fixed or manual iris lenses or to connect auto-iris or direct drive lenses. Also provided are automatic and manual white balance and switchable exposure compensation and synchronisation schemes, to provide exceptional operational versatility.

Both cameras are available with built-in mains or universal low voltage power supplies and can have as an option an integral character generator for generating on-screen camera captions.

- Usable picture at 2 lux scene illumination (2.5 lux CD9312)
- Advanced exposure control permits use of low-cost fixed iris lenses
- Accepts a wide range of fixed, manual, auto iris and direct drive lenses
- User choice of exposure compensation for demanding lighting conditions
- Range of user selectable electronic shutter speeds
- Resolutions of 330 lines (CD9311) and 460 lines (CD9312)
- Three synchronisation schemes for high picture stability in all applications
- Variants with built-in character generator for captioning

CD9311/CD9312
SPECIFICATIONS

CD9000
CAMERA RANGE

CD9311/CD9312

This specification is for PAL/CCIR versions only, NTSC/EIA specification is available on request.
CD9311 : Medium Resolution Colour Camera.
CD9312 : High Resolution Colour Camera.
The above cameras are mains, add /LV for the 12V DC / 24V AC version.

Sensors	Sony Hyper-HAD™ 1/3" CCD with a micro-lens over each pixel
Effective Pixels	CD9311 : 500 (H) x 582 (V) CD9312 : 752 (H) x 582 (V)
Sensitivity	CD9311 : 2.0 lux CD9312 : 2.5 lux both at minimum scene illumination for usable picture with AGC and lens at f1.2 (80% scene reflectivity).
Resolution	CD9311 : 330 TVL equivalent CD9312 : 460 TVL equivalent
Electronic Shutter Speeds	These can be set to 1/50, 1/125, 1/250, 1/500, 1/1000, 1/2000, 1/4000, $1/10^4$s. The cameras also have a FLICKERLESS shutter speed for minimising flicker under fluorescent lights.
Exposure Monitoring	Automatic exposure is set according to: Standard Mode - monitors light level over whole frame; Back Light Compensation (BLC) Mode - weights light level compensation more towards the centre of the screen.
Exposure Compensation	The exposure is compensated by one of the 3 following methods: **Electronic Iris (EI)** Internally compensates for scene illumination by automatically adjusting electronic shutter speed between 1/50 to $1/10^5$s. **Auto-Iris Lens Drive (AI)** For controlling an auto-iris lens a 3-terminal, spring-loaded, quick-release, clip connector is provided. **Direct Drive (DD)** For controlling a direct-drive lens an output-connector is provided. When using a DD lens the video level can be adjusted using the lens-level pot. A spare plug is provided for lenses without one.

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Video Output	1V pk-pk composite video via 75 ohm BNC connector. PAL/CCIR : 625 lines, 50 fields per second, 2:1 interlace.
Signal to Noise Ratio	Better than 48dB weighted (pk-pk signal / RMS noise)
Synchronisation	Three methods are provided (FIX, ADJ, INT): Line-lock (LL) locks the camera frame rate to the mains frequency in fixed (FIX) mode or can be adjusted to ±120° of the mains phase in adjust (ADJ) mode. Internal (INT) locks the camera frame rate to its own crystal oscillator.
White Balance	Automatic (AUTO) or manual (MAN) settings. In manual mode the adjustment of the blue and red levels is via two pots on the side of the camera. In AUTO mode auto-iris gives continuous auto-white-tracing.
Gamma Correction	Selectable, 0.8 or 0.45.
Lens Types	Any 1/3", 1/2", 2/3" or 1" 'C' or 'CS' mount lens. Note: the maximum back extension on a lens is 8mm.
Camera Focus	This may be adjusted from two positions (top and side) and allows use of both 'C' and 'CS' mount lenses.
Camera Mounting	1/4" BSW threaded holes top and bottom.
Power Supply	Mains version: 230V AC ±10% 50Hz /LV versions: automatic selecting power-supply between 12V DC and 24V AC consumption : <5 Watts Power is indicated by a green LED on the back-panel.
Dimensions	132 (L) x 60 (H) x 67 (W) mm
Weight	0.5 kg
Material	Aluminium extruded body with die-cast lens mount and ABS plastic front trim and rear bezel.
Colour	Oyster White.

™Sony Hyper-HAD is a trademark of Sony Corporation.

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The manufacturer reserves the right to alter price or specification without prior notice.

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CD9000 CAMERAS

INFRA-RED VIDEO CAMERA CD9242

This camera is the best choice for covert surveillance for use with ambient lighting and supplementary infra-red scene illumination. Its response extends from visible light far into the infra-red, and the combination of 530 lines resolution and high sensitivity across the spectrum ensures detailed pictures in almost any application.

The camera features a Texas Instruments frame transfer 1/2" CCD sensor. A choice of whole frame or centre weighted exposure compensation if offered, and the camera will accept both auto-iris and direct drive lenses. To enable it to be incorporated into the widest range of CCTV systems, it is provided with a choice of synchronisation methods and has both mains powered and low voltage ac/dc variants.

- Exceptional sensitivity giving usable picture at 0.05 lux scene illumination
- Excellent infra-red response with no IR filter required for daylight use
- User choice of whole frame or back-light compensation exposure monitoring
- Accepts a wide range of auto iris and direct drive lenses
- High resolution of 530 lines
- Four synchronisation schemes for high picture stability in all applications

COMPACT LOW COST CAMERAS CD8215 and CD8315

These cameras provide an economical solution for general purpose CCTV applications without compromising picture quality or reliability. Both cameras incorporate Sony Hyper HAD™ interline transfer 1/3" CCD sensors, with on-chip micro-lenses over each pixel. They feature a broad range electronic iris system to accommodate low cost fixed or manual iris lenses and also have provision for direct drive lenses.

The CD8215 is a monochrome camera with a resolution of 380 lines, capable of producing usable pictures from starlight to full sunlight. The CD8315 is a colour camera with 330 lines resolution, centre weighted exposure monitoring and auto/manual white balance, and is capable of operating in twilight conditions.

Both cameras are exceptionally compact and are powered from a 12V dc supply.

- Usable picture at 0.1 lux scene illumination (CD8215) and 2 lux (CD8315)
- Compact, attractive design
- Advanced exposure control permits use of low-cost fixed iris lenses
- Accepts a wide range of fixed, manual, and direct drive lenses
- Resolutions of 330 lines (CD8315) and 380 lines (CD8215)

Hyper HAD is a trade mark of Sony Corporation

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CD9000 CAMERA RANGE

FEATURES	CD 8215	CD 8315	CD9230	CD9251	CD9252	CD9242	CD9311	CD9312
	Monochrome Medium Resolution (12v) CCD Camera	Colour Medium Resolution (12v) CCD Camera	Monochrome Medium Resolution CCD Camera	Monochrome High Resolution CCD Camera	Monochrome High Resolution CCD Camera	Monochrome Infra-Red CCD Camera	Colour Medium Resolution CCD Camera	Colour High Resolution CCD Camera
Resolution	380 TVL	330 TVL	380 TVL	580 TVL	580 TVL	530 TVL	330 TVL	460 TVL
Sensitivity	0.1 lux @ F1.2	2 lux @ F1.2	0.1 lux @ F1.2	0.1 lux @ F1.2	0.1 lux @ F1.2	0.05 lux @ F1.2	2 lux @ F1.2	2.5 lux @ F1.2
Adjustable Gamma			(2 levels)	(2 levels)	(2 levels)	(2 levels)	(2 levels)	(2 levels)
AGC	●	●	●	●	●	●	●	●
Backlight Compensation		●	●	●	●	●	●	●
White Spot BLC				●	●			
Switchable Shutter speed and flickerless			●		●		●	●
Electronic Iris	●	●	●	●	●		●	●
DD Socket	●	●	●	●	●	●	●	●
Auto Iris Socket			●		●	●	●	●
C/CS Mount	●	●	●	●	●	●	●	●
Genlock			●		●	●		X
Line Lock with Phase Adjust. (AC Versions)			●		●	●	●	●
AGC on/off			●	●	●	●	●	●
EI on/off			●	●	●		●	●
BLC on/off			●	●	●	●	●	●
Microprocessor Controlled Exposure				●	●		●	●
Character Gen (9 Characters)							Option in longer case	Option in longer case
12v DC/24v AC Supply			●		●	●	●	●
12v DC Supply	●	●						
230v AC Power Supply			●	●	●	●	●	●
Case Size	Small	Small	Standard	Standard	Standard	Standard	Standard	Standard
Back Focus - 2 Adjustment Positions	●	●	●	●	●	●	●	●

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